

IN THE CLAIMS:

1. (Currently Amended) A coin separating unit comprising:

a coin transporting unit including a flexible first rotatable belt for receiving coins of different size on a support surface of the first rotatable belt that translates the coins linearly for subsequent processing, the support surface having a predetermined flexibility and friction characteristic to engage the coins for linear translation and to enable coin movement transverse to a direction of movement where the coin transporting unit provides forward drive of the coins;

a separating roller unit positioned above the support surface at a distance no greater than twice the thickness of the coins to be separated, the surface of the separating roller unit closest to the support surface moving in a direction opposite to the movement of the support surface; [[and]]

a supporter roller unit mounted on a pivotable lever is operatively located upstream of the separating roller unit, rotates freely around the rotating shaft, contacts the first rotatable belt, moves away from the first rotatable belt when the coin contacts the supporter roller unit, the separating roller unit and the supporter roller unit rotate about parallel axes extending above and across the rotatable belt, the supporter roller unit is only driven by contact with the rotatable belt or passing coin and,[[.]]

a coplanar support member with trailing and leading edges configured to reduce interference is mounted for relative movement adjacent and underneath the flexible rotatable belt to limit the extend of transverse coin movement beneath the separating roller unit to enable only a single coin to pass beneath the separating roller.

2. (Previously Presented) The coin separating unit of Claim 1 wherein the separating roller unit is rigidly fixed above the support surface.

3. (Original) The coin separating unit of Claim 1 further including a coin drawing auxiliary unit is located downstream of the separating roller unit.

4. (Original) The coin separating unit of Claim 1 wherein the separating roller unit rotates so that its surface closest to the support surface is moving opposite to the translation direction of the support surface.

5. (Cancelled)

6. (Previously Presented) The coin separating unit of Claim 1 wherein the supporter unit is biased by a predetermined force towards the support surface.

7. (Original) The coin separating unit of Claim 6 wherein the supporter unit is biased by a spring member.

8. (Original) The coin separating unit of Claim 1 further including a second coin transporting unit for receiving a coin from the first coin transporting unit and translating the coin at a faster speed than the first coin translating unit.

9. (Currently Amended) In a coin separating assembly for separating coins of different sizes, the improvement comprising:

 a coin hopper for receiving various coins of different sizes in bulk;

 a rotating belt positioned under the coin hopper for receiving coins from the coin hopper by a gravity feed, the rotating belt has a coplanar pivoting support member with an

elongated surface for supporting an underside of the rotating belt between the rotating belt pulleys having trailing and leading edges to reduce interference with the rotating belt; and

a separating roller unit positioned above the rotating belt at a distance no greater than twice the thickness of the coins to be separated, the surface of the separating roller unit closest to the rotating belt moving in a direction opposite to the movement of the support surface,

wherein the rotating belt has a predetermined flexibility to enable a coin to be pushed by the separating roller unit into the rotating belt and the pivoting support member ~~accommodates the~~ is configured to only permit coin movement, on the rotating belt transverse to the directional movement of the belt, ~~by tilting the elongated surface on an underside of the rotating belt of less than twice the thickness of the thinner coin to be separated~~; and

a supporter roller unit mounted on a pivotable lever is operatively located upstream of the separating roller unit, rotates freely around the rotating shaft, contacts the first rotatable belt, moves away from the first rotatable belt when the coin contacts the supporter roller unit, the separating roller unit and the supporter roller unit rotate about parallel axes extending above and across the rotatable belt, ~~the supporter roller unit is only driven by contact with the rotatable belt or passing coin.~~

10. (Currently Amended) In a coin separating assembly for separating coins of different sizes, the improvement comprising:

a coin transporting unit including a rotating belt for translating coins along a direction of movement having a predetermined flexibility to permit displacement of a coin being translated in a transverse direction;

a separating roller unit having a plurality of separating rollers rotably mounted at

a fixed distance above a coin supporting surface of the rotating belt; [[and]]

a supporter roller unit mounted on a pivotable lever is operatively located upstream of the separating roller unit, rotates freely around the rotating shaft, contacts the first rotatable belt, moves away from the first rotatable belt when the coin contacts the supporter roller unit, the separating roller unit and the supporter roller unit rotate about parallel axes extending above and across the rotatable belt, the supporter roller unit is only driven by contact with the rotatable belt or passing coin,and

a belt supporter member movably positioned to contact and support an underside of the rotating belt under the separating roller to limit a transverse movement of the rotatable belt, relative to the linear movement of the rotating belt, wherein the extent of transverse coin movement with the rotating belt only enables a single coin to pass beneath the separating roller on the rotating belt.

11. (Currently Amended) A coin separating unit comprised of:

a coin transporting unit including a first flexible belt and a second rotatable belt where plural coins are transported linearly towards a storing direction;

a separating roller which is located the first rotatable belt at a distance which is, at most, two times a thinness of the thinnest coin of the plural coins or less, when the first rotatable belt moves in the storing direction, the separating roller is fixed on a rotating shaft, a peripheral surface of the rotatable belt moves in the opposite direction to the storing direction, underneath the separating roller;

a supporter roller mounted on a pivotable lever is operatively located upstream of the separating roller, rotates freely around the rotating shaft, contacts with the first rotatable belt,

moves away from the first rotatable belt when the coin contacts the supporter roller, the separating roller and the supporter roller rotate about parallel axes extending above and across the rotatable belt, the supporter roller is only driven by contact with the rotatable belt or passing coin;

a first drawing auxiliary roller mounted on a pivotable lever is operatively located downstream of the separating roller and is rotated freely around the rotating shaft, and contacts the first rotatable belt; and

a coplanar support member with trailing and leading edges configured to reduce interference is mounted for relative movement adjacent and underneath the rotatable first flexible belt to limit the extent of transverse coin movement against the first flexible belt beneath the separating roller unit.

a second drawing roller mounted on the pivotable lever, contacting the second rotatable belt.

12. (Previously Presented) The coin separating unit as claimed in claim 11:

the first flexible rotatable belt resiliently bends downward at the position of the separating roller, which is fixed at a predetermined position above the rotatable belt when a coin passes beneath the separating roller.

13. (Cancelled)

14. (Previously Presented) The coin separating unit as claimed in claim 11:

the supporter roller is rotatable on a lever, which is pivotable and is coaxially mounted to the separating roller, also the supporter roller is urged to the coin transporting unit by a predetermined force.

15. (Previously Presented) The coin separating unit as claimed in claim 11:
the supporter roller has contact with the first flexible rotatable belt and is rotated by the first flexible rotatable belt.
16. (Previously Presented) The coin separating unit as claimed in claim 11:
further including a coin drawing auxiliary unit located downstream of the separating roller.
17. (Previously Presented) The coin separating unit as claimed in claim 11, the separating roller rotates in an opposed movement to the coin transporting unit.
18. (Previously Presented) The coin separating unit as claimed in claim 11:
the second drawing auxiliary roller is located downstream of the coin transporting unit and the second rotatable belt beneath the second drawing auxiliary roller moves faster than the first flexible rotatable belt.
19. (Previously Presented) The coin separating unit as claimed in claim 18:
the first drawing auxiliary roller is located downstream of the separating roller and has a distance between the first drawing auxiliary roller and the first rotatable belt which is, at most, thinner than the thinnest coin and is located upstream from the second rotatable belt.
20. (Previously Presented) The coin separating unit as claimed in claim 11:
the distance between the separating roller and the first rotatable belt is less than two times the thickness of the thinnest coin and larger than the thickness of the thickest coin of the plural coins.

21. (Previously Presented) The coin separating unit as claimed in claim 11: the supporter roller rotates in an opposite direction to the movement of the coin transporting unit when moving a coin towards the storing direction.

22.-23. (Cancelled)

24. (Previously Presented) The coin separating unit as claimed in Claim 11 wherein the first flexible rotatable belt is formed with a urethane rubber surface and a polyamide core.

25. (Previously Presented) The coin separating unit as claimed in Claim 11 wherein a one way clutch member provides rotation to the separating roller.

26. (Previously Presented) The coin separating unit as claimed in Claim 11 wherein a diameter of the separating roller is twice a diameter of supporter roller.

27. (Previously Presented) A coin separating unit comprised of:

a coin transporting unit including a rotating belt mounted on a pair of rollers for translating coins along a linear direction of movement, the rotating belt has a predetermined flexibility to permit displacement of a coin being translated in a traverse direction to the direction of movement wherein plural coins on the rotating belt are transported towards a storing direction;

a separating roller unit is rigidly fixed above a surface of the rotating belt at a distance which is at most two times a thinness of a thinnest coin or less, the rotating belt moves in the storing direction, a peripheral surface of the separating roller unit is driven in an opposite direction to the storing direction, the rotating belt bends elastically relative to the separating

roller for increasing coin passage distances between the surface of the rotating belt and the peripheral surface of the separating roller unit;

a supporter roller unit mounted on a pivotable lever is operatively located upstream of the separating roller unit, rotates freely around the rotating shaft, contacts the first rotatable belt, moves away from the first rotatable belt when the coin contacts the supporter roller unit, the separating roller unit and the supporter roller unit rotate about parallel axes extending above and across the rotatable belt, the supporter roller unit is only driven by contact with the rotatable belt or passing coin;

a first drawing roller is located downstream from the separating roller unit and is located above the rotating belt to contact coins, the first drawing roller is adjacent the peripheral surface of the separating roller unit and is rotatable on a second lever which is pivotable and coaxially to the separating roller unit, the supporter roller unit is urged toward the rotating belt by gravity, to have contact with the rotating belt, and

a belt supporter member movably positioned to contact and support an underside of the rotating belt under the separating roller to limit a transverse movement of the rotatable belt, relative to the linear movement of the rotating belt, wherein the extent of transverse coin movement with the rotating belt only enables a single coin to pass beneath the separating roller on the rotating belt.

wherein the supporter roller unit is positioned to contact a coin on the rotating belt, and press the coin into the rotating belt by gravity, the pressed coin is nipped by the rotating belt and the separating roller unit, and the rotating belt is elastically bent by the coin, as the nipped coin passes through the distance between the rotating belt and the separating roller unit, the nipped coin is then pressed into the rotating belt by the first drawing roller and is drawn by

the first drawing roller and the rotating belt, thereafter the drawn coin is transported toward a second coin transporting unit by the first drawing roller unit and the rotating belt.

28. (Previously Presented) The coin separating unit of claim 27 wherein the second coin transporting unit for receiving a coin from the rotating belt includes a second belt which is driven at a faster speed than the rotating belt, and a second drawing roller is attached to the second lever downstream from the first drawing roller, and the second drawing auxiliary roller contacts with the second belt by gravity.